Public and private land-disturbing projects may impact a variety of natural, cultural and recreational resources, requiring a permit application or another enabling instrument. The permit application must describe potential impacts and outline methods for avoiding and/or mitigating these potential impacts. Depending on the resources that may be impacted, review and approval from several government agencies may be required. For many proposed projects, approval at the local level is sufficient; other activities are directly regulated by state or federal agencies.

The Department of Environmental Quality (DEQ), www.deq.virginia.gov, is the coordinating agency for statewide review of most environmental review documents in Virginia. The DEQ distributes submitted project documents to state agencies for review and response according to each agency's area of responsibility and expertise. Furthermore, in accordance with the *Code of Virginia* § 15.2-2202, DEQ invites review and comment by affected localities and planning district commissions to determine consistency with the locality's comprehensive plan and ordinances. DEQ completes the process with coordination and analysis of all responses.

Applicable DEQ review authorities

The Code of Virginia § 10.1-1188 requires state agencies to prepare and submit an Environmental Impact Report (EIR) for each major state project. "Major state project" constitutes the acquisition of an interest in land for construction of any state facility, or the construction of any state facility or expansion of an existing state facility costing more than \$100,000. Projects undertaken by federal agencies are required to have an environmental assessment (EA) or an environmental impact statement (EIS) submitted in accordance with the National Environmental Policy Act (NEPA) — Code of Virginia §10.1-1183 (9).

Content of an Environmental Impact Report (EIR)

The purpose of the environmental review is to ascertain the environmental effects of proposed projects and allow for project modifications to avoid, reduce or mitigate for those impacts. The environmental review process should begin in the early planning stages of a project so that site and design procedures can best be determined. It is recommended that the DEQ office of Environmental Impact Review be contacted for assistance in the EIR process.

To assure timely project review, the EIR must address five subjects specified by §10.1-1188:

• The environmental impact of the project including the impact on wildlife habitat; (additionally the environmental impact of the project on farm and forest lands pursuant to *Code of Virginia* § 3.1-18.4 through § 3.1-18.8);

- Adverse effects that cannot be avoided if the project is undertaken;
- Measures proposed to minimize the impact of the project:
- Alternatives to the proposed construction; and
- Irreversible environmental changes which would be involved in the project.

The document must identify and describe the resources present on sites of interest, and it should evaluate how the planned use of the site may affect the resources listed below.

- Endangered, threatened, or rare plants, animals, or insects:
- Significant habitat for terrestrial wildlife and birds, e.g., habitat for rare species, important breeding sites, migratory stopovers;
- Other unique or important terrestrial vegetation, e.g., foraging areas, stands of mature forest, wilderness study areas;
- Aquatic life: fisheries, vegetation (including submerged aquatic vegetation), benthic organisms, shell growing area. If s shell growing area is involved, it should be indicated whether the Virginia Department of Health has issued a shellfish condemnation notice for the subject waters;
- Historic sites, structures and/or landscapes indicate potential for direct or indirect effects;
- Agricultural land, either prime or important (as defined by the Natural Resources Conservation Service, the Virginia Department of Agriculture and Consumer Services, or local ordinance), or farming operations;
- Forest land, including predominant tree species and any endangered, threatened, or rare tree species;
- Tidal and nontidal wetlands (delineation may be required).
 The review of National Wetland Inventory (NWI) maps should be used in conjunction with field observations for determining whether wetlands or other surface waters are present, and a wetland delineation may also be required;
- Streams, rivers, lakes and ponds on or near the site. The EIR should include information about flow volumes (available at the Richmond office of the U. S. Geological Survey Water Resources Division or DEQ's Charlottesville Field Office) and water quality (available from DEQ's most recent biennial Section 305(b) Water Quality Assessment Report to the U.S. EPA). Stream segments with water quality problems can also be identified from DEQ's Section 303(d) list of impaired waters. Also, the EIR should indicate whether stream segments at the site are protected by designated DEQ Special Water Quality Standards, or are

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located within identified trout waters. Any record of prior fish kills or petroleum releases in the project vicinity should be reported. The status of the waterbody under DCR's Nonpoint Source Assessment should be documented;

- Watersheds of significant importance for public water supplies (such as wellhead protection zones or watershed protection zones designated by local ordinance);
- Chesapeake Bay Resource Protection Areas and Chesapeake Bay Management Areas;
- Virginia Coastal Resources Management Area (Tidewater);
- The 100-year floodplain;
- Ground water The EIR should identify the types of aquifers present and wells on or near the property that draw water from the aquifer. If groundwater withdrawal is proposed, it should be indicated whether the project site is located within a State Water Control Board designated Ground Water Management Area and if anticipated withdrawal will exceed 300,000 gallons of water in any month. The total volume of water to be withdrawn, both monthly and annually, should be clearly documented. Identification should be made of parks and recreation areas (federal, local, state, or private); and recreation and open space resources identified by the Virginia Outdoors Plan (Department of Conservation and Recreation);
- Public access to the shoreline and waterways (if applicable);
- Important natural areas, e.g., wildlife refuges and wilderness areas, important natural areas identified by public agencies and important private conservation areas;
- Important scenery and scenic resources, for instance views of important landmarks or natural features;
- Air quality If applicable, possible impacts that need to be addressed in the EIR include: will construction or operation of the facility cause air pollution emissions; is open burning proposed; how will fugitive dust be controlled, is the project site located within a (i) non-attainment area for criteria pollutants such as ozone, (ii) a State designated Volatile Organic Compound and/or Nitrogen Oxides Emissions Control area, or (iii) Prevention of Significant Deterioration Area (iv) 10 kilometers of a federally designated Class 1 (pristine) area;
- Geology and Mineral Resources, caves, and sinkholes.
 The discussion should include identification of site-specific geologic and mineral resources from data and maps at an appropriate scale;
- Other important resources such as designated scenic rivers, Virginia Byways, and important natural communities.

State Environmental Review Process (SERP)

In 1991, Virginia's Secretaries of Natural Resources and Transportation agreed that state historic and natural resource agencies would have the opportunity to comment on all state-funded highway projects at the earliest stage of development. As a result of this agreement, the State Environmental Review Process was established. Such review allows relevant agencies to address potential impacts of proposed projects, suggest mitigation measures to minimize impact and explore possible alternatives to the proposed construction.

Activities and applicable regulatory authorities

In addition to the above, the following proposed activities are reviewed by state agencies for environmental impact as well as compliance with associated laws, regulations and permit requirements and approval of funding and/or grants:

- Airport construction and expansion projects; Code of Virginia § 5.1-7
- Dredging and filling of waters of the United States, including wetlands; Section 404, Clean Water Act
- Projects within the Virginia Coastal Resource Management Area for compliance with the Chesapeake Bay Preservation Act; Code of Virginia § 10.1-2114
- Encroachments in, on or over state-owned bottomlands or wetlands; Code of Virginia § 62.1-1 through § 62.1-13;
- Projects that require Erosion and Sediment Control and Stormwater Management plan approval; Code of Virginia § 10.1-560 and § 10.1-603
- Projects that propose extraction of minerals on stateowned lands; Code of Virginia §2.1-512.1
- Projects within the coastal zone to be reviewed for federal consistency with the Virginia Coastal Resource Management Program; Executive Order Number 15 (90)
- Projects involving permiting hazardous materials which may effect a solid waste disposal facility; Code of Virginia §10.1-1400 et seg
- Hydropower projects; Code of Virginia §10.1-1186 (8)
- Projects that may obstruct navigable waterways; Section 10, Rivers and Harbors Act
- Oil and gas drilling projects in Tidewater, Virginia; Code of Virginia § 62.1-195.1
- Projects that require State Water Control Board-administered permits; Section 402 of the Clean Water Act and Code of Virginia § 62.1-44.2 through § 62.1-44.34:23
- Projects that may negatively impact minimum instream flow; Code of Virginia §62.1-11 F

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Resource information

Through the environmental review process, information is disseminated about natural resources and how the resources can be conserved and enhanced. The commonwealth's goal is twofold – providing opportunities for Virginians to use these valuable resources while conserving and enhancing them for future generations.

The following publications offer assistance regarding compliance with Virginia's environmental laws: A General Guide to Environmental Regulations in Virginia, and Business and Industry Guide to Environmental Permits in Virginia. These guides are available at:

Virginia Department of Environmental Quality (DEQ)

629 E. Main Street, Suite 900 Richmond, VA 23219 (804) 698-4000 or toll free in Virginia, (800) 592-5482 www.deq.virginia.gov For help with erosion and sediment control and stormwater management regulations contact:

Virginia Department of Conservation and Recreation (DCR)

Soil and Water Conservation Division 203 Governor Street, Suite 206 Richmond, VA 23219 (804) 786-2064 www.dcr.virginia.gov

For information on the impact of land use on the water that feeds the Chesapeake Bay, contact:

Chesapeake Bay Local Assistance Division

101 North 14th Street, 17th Floor Richmond, VA 23219 Toll Free/TDD (800) CHESBAY www.dcr.virginia.gov

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